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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/918,404

07/30/2001

Lawrence A. Booth JR.

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10/18/2004

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,404

Applicant(s)

BOOTH ET AL.

Examiner

Peter J Macchiarolo

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,11,12 and 14-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,11,12 and 14-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application 08/20/2004. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.14. Applicant's submission filed on 08/20/2004 has been entered. However, pending claims 1, 3-5, 11, 12, and 14-26 are not allowable as explained below. An action on the RCE follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 3, 4, 11, and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Sakaguchi et al (USPN 5990615: "Sakaguchi") in view of Harvey et al (USPN 5686360; "Harvey").**

3. Regarding claims 1 and 23, Sakaguchi shows in figure 3, an organic light emitting display comprising a module including a front plate (1) and a back plate (9a); an organic light emitting material (4) formed on one side of the front plate the back plate secured over the one side of the front plate; and a filler material (12) including a desiccant (10) formed in the module.

Sakaguchi further infers the light emitting material passes light outwardly through the front plate, since the electrode (2) is transparent.

4. Sakaguchi is silent to a plurality of modules.

5. However, using a plurality of modules to form an array is known in the art, as evidenced by Harvey. Harvey shows in figure 8 that it is possible to configure a display having a plurality of modules from one module, and this allows for a more robust display device.¹

6. Further, having multiple modules with the above configuration is a matter of obvious design choice, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Pater Co. v. Bemis Co.*, 193 USPQ 8.

7. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Sakaguchi with an array of modules.

8. The Examiner notes that the limitation in claim 1, "to seal the region between said front and back plates" is an intended use type limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

9. The Examiner further notes that even though Sakaguchi's modules share a front panel, the claim is not patentable over Sakaguchi's structure, since Applicant has not recited that each module comprises a separate front panel.

¹ Harvey, col. 1, ll. 34-37.

10. Regarding claims 3 and 4, Sakaguchi teaches a dehydrating agent such as granular silica gel or zeolite may be used to absorb oxygen or moisture to increase the overall lifetime of an organic EL display device.²

11. Regarding claim 22, Sakaguchi shows the front plate is surface mounted to the back plate.

12. Regarding claim 11, Sakaguchi shows in figure 3, a front plate (1) having an organic light emitting material (4) deposited thereon, a back plate (8) covering the organic light emitting material, and a filler (12) material including a desiccant (10) mixed into said filler material surrounding the module.

13. Sakaguchi is silent to a plurality of light emitting device modules combined to form an array and the regions between adjacent modules filled with the filler material.

14. However, using a plurality of modules to form an array is known in the art, as evidenced by Harvey. Harvey shows in figure 8 that it is possible to configure a display having a plurality of modules from one module, and this allows for a more robust display device.³ Furthermore, Harvey shows regions between adjacent modules are filled with a filler material (56).

15. Further, having multiple modules with the above configuration is a matter of obvious design choice, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Pater Co. v. Bemis Co.*, 193 USPQ 8.

² Sakaguchi, col. 3, ll. 27-29; and col. 1, ll. 39-59.

³ Harvey, col. 1, ll. 34-37.

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16. One would be motivated to use Sakaguchi's filler material with a desiccant (10) mixed into said filler material to further protect the organic light emitting element from moisture.

17. Further, Applicant's method of forming, covering, sealing, combining, and filling are extremely broad. Hence, the structure taught by Sakaguchi and Harvey meets Applicant's recited method step limitations. This applies to all of the following method steps.

18. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Sakaguchi with an array of modules having the filler material surrounding each module to further prevent moisture from damaging the organic light emitting element in a robust display device.

19. Regarding claim 16, Sakaguchi shows the front plate is surface mounted to the back plate.

20. Regarding claim 17, Sakaguchi shows in figure 3, the front plate includes forming a transparent front plate (glass panel 1) to pass light emitted from the organic light emitting material outwardly through the front plate.

21. Regarding claims 18 and 24, Sakaguchi shows in figure 3, the module is secured to a carrier (2) with a filler material including a desiccant mixed into the filler material.

22. Regarding claims 19 and 25, Sakaguchi shows in figure 3 a lip (14) of filler material is formed that extends beyond the periphery of the module and the carrier.

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23. Sakaguchi is silent to an array of modules.

24. However, this limitation has been taught and discussed above at claim 11.

25. Regarding claims 20, 21 and 26, Sakaguchi and Harvey are silent to the filler material including desiccant is sealed in a rejoin between the front plate and the back plate.

26. However, this is an obvious modification, since this will further protect the organic element from the ingress of moisture.

27. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Sakaguchi and Harvey with filler material including desiccant being sealed in a rejoin between the front plate and the back plate to provide a highly water-resistant organic EL device. The Examiner notes that the filler material in this configuration will be in contact with the organic light emitting material.

28. **Claims 5 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Sakaguchi in view of Harvey, in further view of previously cited Yamazaki et al (USPN 6641933; "Yamazaki").**

29. Regarding claims 5 and 12, Sakaguchi and Harvey are silent to the filler material including epoxy.

30. However, Yamazaki discloses the filler material (adhesive 710) must be required to prevent oxygen and water from passing therethrough as perfectly as possible allowing for proper operation, and one suitable material is epoxy.⁴

31. Furthermore, using epoxy would have been obvious to one having ordinary skill in the art that the time the invention was made, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Further, one would be motivated to this configuration for a variety of reasons, including material availability and manufacturing processes with sensitive requirements.

32. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Sakaguchi and Harvey with epoxy.

33. Regarding claims 14 and 15, Sakaguchi teaches a dehydrating agent such as granular silica gel or zeolite may be used to absorb oxygen or moisture to increase the overall lifetime of an organic EL display device.⁵

34. Although Sakaguchi and Harvey are silent to the filler material including epoxy, Yamazaki teaches this configuration. The reasons and motivation for combining is the same as for claim 5.

⁴ Yamazaki, col. 18, ll. 48-56.

⁵ Sakaguchi, col. 3, ll. 27-29; and col. 1, ll. 39-59.

Response to Arguments

35. Applicant's arguments filed 08/20/2004 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

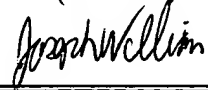
36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6470594 to Boroson shows an organic EL device having a structure similar to Applicant's. However, Boroson does not qualify as prior art and is therefore not relied upon in this rejection.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PJM


Joseph Williams
Primary Examiner
AU 2879